



Air Command® 80SSEII

**GUIS (Upflow/Horizontal)
GCIS (Counterflow/Horizontal)
Two-Stage Gas Furnace**

HEATING · AIR CONDITIONING

Induced draft design delivers precise gas/air mixture for optimum combustion and reduces external air infiltration into the home.

Features

40" Height simplifies installation in attics, closets, and crawl spaces and leaves more room for high efficiency air conditioning coils.

Multi-Poise GUIS/GCIS Amana furnaces can be laid on their left or right sides by moving the location of a few internal components. Also allows horizontal left or right airflow configurations in upflow and counterflow models.

Steel Cabinet is cleaned and chemically treated to stringent standards prior to applying the finish paint. The result is enhanced corrosion protection for a durable finish.

0" Clearance Back and sides allow 0" clearance for increased installation flexibility. Front panel clearance of 3", with the use of Type B vent, allows installation in tight places.

Electronic Controls Most furnace systems once handled by separate relays and switches are now operated by one electronic control board. Pilot flames are eliminated by a hot surface ignitor. Instant safety shutoff occurs if flame is not sensed. Should furnace need service, a blinking diagnostic light visible through a viewport can alert the homeowner to most problems without removing cabinet doors. In addition, installation of accessories such as an electronic air cleaner and humidifier are simplified by terminals provided on the control module. An additional transformer is not needed to add air conditioning.

409 Stainless Steel Tubular Heat Exchanger Patented long-lasting tubular design offers superior corrosion resistance. Limited lifetime warranty.

Two-Stage Gas Valve maintains the precise amount of gas for optimum comfort and efficiency at any furnace setting.

Convertible to Propane Gas Simple kit available for conversion to Propane Gas. No gas valve change or gas valve spring change needed.

Inshot Burners Latest burner design ensures efficient utilization of heat contained in gas. NOx inserts included in some models for compliance with tough California emission standards. Burners are completely enclosed within a steel box keeping operating sound levels virtually unheard.

Multiple Safety Controls include rollout and auxiliary limit switches with manual reset as well as a high temperature limit switch with auto reset. In addition, there are dual automatic low pressure switches - one for each stage. Remote flame sensor device assures positive ignition.

Induced Draft Blower Motor System Quiet 2-speed induced draft blower ensures burned gases vent properly. When furnace is off, warm house air is blocked from going up the flue. Net result is increased savings for homeowner.

Versatility Inducer motor can rotate 90 degrees CCW to allow 2 different vent positions. Vent out the side or the top of the furnace casing for situations where alternate vent configurations are needed.

Venting GUIS/GCIS furnaces are certified for Category I venting only.

Quiet PSC Blower Motor 4-speed motor. Simplified speed change with minimum effort.

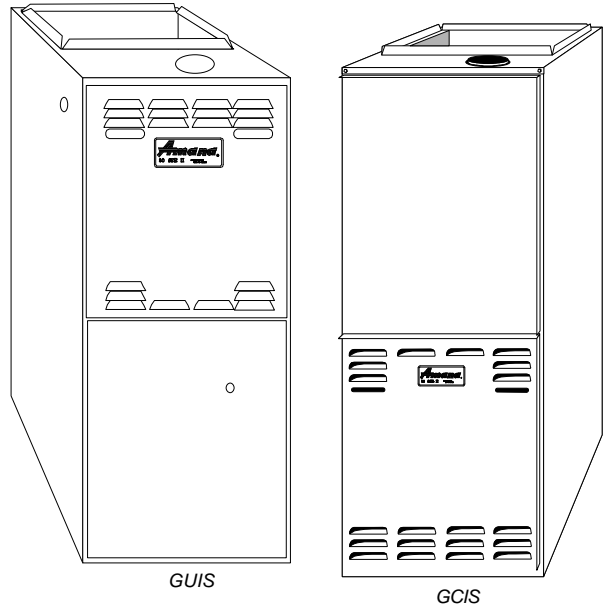
Adaptable Wiring Line voltage wiring can be from left or right. Quick-connects and plug-in harnesses for simple removal of parts. Thermostat wiring easily attached to internal terminal board.

CSA Certified These Amana furnaces are certified as meeting the requirements of CSA International for gas fired furnaces in U.S. and Canadian installations.

Quality Assurance The Amana name stands for quality - and has for over 50 years. All Amana products are fully tested to meet strict engineering standards and to assure you of a quality product. Every unit is individually leak checked and functionally tested prior to shipment. The ISO 9001 registration is an internationally recognized standard of excellence. Amana's Fayetteville, Tennessee manufacturing facility, which builds this unit, was the first in the heating and air conditioning industry to be awarded this certificate of registration for quality management systems.

**70,000 through 140,000 Btuh Heating Inputs
1½ to 5 Tons Add-on Cooling**

80% Annual Fuel Utilization Efficiency



**EXCEPTIONAL
WARRANTIES**

**LIMITED LIFETIME
ON HEAT EXCHANGER**

**5-YEAR LIMITED
ON ALL FUNCTIONAL PARTS**

**Coverage can be further enhanced
by asking for the**



**Ask your Amana representative
for details!**



Heating & Air Conditioning
Amana®
Comfort. Quality. Trust.

Air Command® 80 SSE II Specification:

GUIS/GCIS 80% Models

Upflow Models

Counterflow Models

	GUIS070C _35	GUIS090C _30	GUIS090C _50	GUIS115C _50	GUIS140C _50	GCIS070C _35	GCIS090C _50
Heating Capacity (BTUH)							
High Fire							
Input ³	69,000	92,000	92,000	115,000	138,000	69,000	92,000
Output ³	55,200	73,600	73,600	92,000	110,400	55,200	73,600
Low Fire							
Input	48,000	64,000	64,000	80,000	96,000	48,000	64,000
Output	38,400	51,200	51,200	64,000	76,800	38,400	51,200
Temp. Rise Range, °F	30-60	35-65	35-65	35-65	45-75	35-65	45-75
Number of Burners	3	4	4	5	6	3	4
AFUE	80.0	80.0	80.0	80.0	80.0	80.0	80.0
Power Supply							
Minimum Circuit Ampacity ¹	10.9	8.0	14.4	13.5	14.4	10.2	14.2
Maximum Overcurrent Device	15	15	15	15	15	15	15
Blower Motor							
D" x W"	10 x 6	10 x 8	10 x 8	10 x 9	10 x 9	10 x 6	10 x 8
HorsePower	1/2	1/2	1/2	3/4	3/4	1/2	3/4
Speeds	4	4	4	4	4	4	4
AC Tons @ .5" ESP	2.5-3.5	1.5-3.5	3.0-5.0	3.0-5.0	3.5-5.0	2.5-3.5	3.0-5.0
High Pressure Switch Setting² (" WC)							
	-0.80	-0.74	-0.74	-0.66	-0.66	-0.55	-0.55
Low Pressure Switch Setting² (" WC)							
	-0.45	-0.37	-0.37	-0.37	-0.32	-0.27	-0.27
Shipping Weight (lbs.)							
	152	169	178	194	198	152	178

¹ Minimum Circuit Ampacity = Circulating Blower Amps x 1.25) + Induced Blower Amps

² As shipped for installations below 2,000 feet. *Furnace installations in Canada are certified only to 4,500 feet.*

³ Ratings for Natural Gas only

Maximum Overcurrent Protection refers to maximum recommended fuse or circuit breaker size.

****FILTERS ARE NOT INCLUDED WITH FURNACE AND MUST BE SUPPLIED BY THE INSTALLER).** (See note bottom page 3.)

Minimum Overcurrent Protection refers to maximum recommended fuse or circuit breaker size.

Flame sensor output is 1 to 4 microamps at 115 volts.

Minimum Filter Requirements (in²)

Disposable Filters

Airflow Requirements (Nominal)

	600 CFM	800 CFM	1000 CFM	1200 CFM	1400 CFM	1600 CFM	2000 CFM
GUIS070CX35	---	---	503*	576	672	---	---
GUIS090CX30	610*	610*	610*	610*	---	---	---
GUIS090CX50	---	---	---	610*	672	768	960
GUIS115CX40	---	---	762*	762*	762*	768	---
GUIS115CX50	---	---	---	762*	762*	768	960
GUIS140CX50	---	---	---	838*	838*	838*	960

	600 CFM	800 CFM	1000 CFM	1200 CFM	1400 CFM	1600 CFM	2000 CFM
GCIS070CX35	---	503*	503*	576*	672	---	---
GC1S090CX50	---	---	---	576*	672	768	960

*Minimum filter area based on Heating Airflow Requirements

Minimum Filter Requirements (in²)

Permanent Filters

Airflow Requirements (Nominal)

	600 CFM	800 CFM	1000 CFM	1200 CFM	1400 CFM	1600 CFM	2000 CFM
GUIS070CX35	---	---	251*	288	336	---	---
GUIS090CX30	305*	305*	305*	305*	---	---	---
GUIS090CX50	---	---	---	305*	336	384	480
GUIS115CX40	---	---	381*	381*	381*	384	---
GUIS115CX50	---	---	---	381*	381*	384	480
GUIS140CX50	---	---	---	419*	419*	419*	480

	600 CFM	800 CFM	1000 CFM	1200 CFM	1400 CFM	1600 CFM	2000 CFM
GCIS070CX35	---	251*	251*	288	336	---	---
GC1S090CX50	---	---	---	288	336	384	480

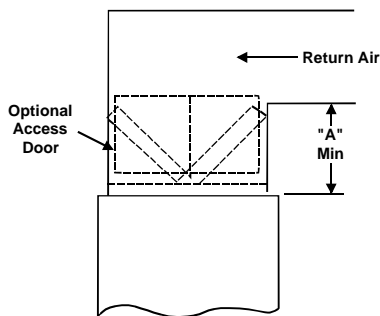
*Minimum filter area based on Heating Airflow Requirements

GUIS Bottom Return Air Filter Sizes

Cabinet Width	Filter Size (Inches)	Filter Area (Inches ²)
16 1/2	14 x 25 x 1	350
20 1/2	16 x 25 x 1	400
24 1/2	20 x 25 x 1	500

GUIS Side Return Air Filter Size

Cabinet Width	Filter Size (Inches)	Filter Area (Inches ²)
All Widths	16 x 25 x 1	400



Size_Air Flow	Dimension "A" Inches		Filter Size (Inches)	
	Throwaway	Permanent	Fiberglass Throwaway	Permanent
70_35	19-3/4	8	(2) 20 x 20 x 1	(2) 10 x 20 x 1
90_50	24-1/4	13	(2) 20 x 25 x 1	(2) 15 x 20 x 1

NOTE:
Filter must be used with unit. Filters do NOT ship with unit but must be provided by installer. Filters must comply with UL900 or CAN/ULCS111 standards. If the furnace is installed without filters, the warranty will be voided.

CFM & Temperature Rise vs. External Static Pressure:

CFM & Temperature Rise vs. External Static Pressure

				External Static Pressure, Inches Water Column																	
				0.1			0.2			0.3			0.4			0.5			0.6		
Model Number (Rise Range) Htg. Speeds as Shipped				Motor Speed	Tons @ .5" ESP	CFM	RISE, HIGH FIRE °F	RISE, LOW FIRE °F	CFM	RISE, HIGH FIRE °F	RISE, LOW FIRE °F	CFM	RISE, HIGH FIRE °F	RISE, LOW FIRE °F	CFM	RISE, HIGH FIRE °F	RISE, LOW FIRE °F	CFM	RISE, HIGH FIRE °F	RISE, LOW FIRE °F	CFM
Upflow Models	GUISO70C_35 (30-60)	HIGH	3.5	1695	30	----	1625	31	----	1580	32	----	1520	34	----	1450	35	----	1365		
		MED-HI	3.0	1485	34	----	1450	35	----	1400	37	----	1350	38	----	1295	39	----	1235		
	High Fire: Med-Lo	MED-LO	3.0	1235	41	----	1200	43	30	1180	43	30	1140	45	31	1115	46	32	1050		
	Low Fire: Low	LOW	2.5	1095	47	33	1070	48	33	1050	49	34	1025	50	35	975	52	37	950		
	GUISO90C_30 (35-65)	HIGH	3.5	1630	42	----	1560	44	----	1550	44	----	1465	47	----	1380	49	35	1275		
		MED-HI	3.0	1360	50	35	1325	51	36	1290	53	37	1215	56	39	1155	59	41	1070		
	High Fire: High	MED-LO	2.0	920	----	52	920	----	52	900	----	53	890	----	54	850	----	56	800		
	Low Fire: Med-Lo	LOW	1.5	770	----	62	750	----	64	740	----	64	730	----	65	690	----	----	660		
	GUISO90C_50 (35-65)	HIGH	5.0	2250	----	----	2185	----	----	2120	----	----	2030	----	----	1975	35	----	1885		
		MED-HI	4.0	1775	38	----	1750	39	----	1735	39	----	1690	40	----	1650	41	----	1600		
	High Fire: Med-Lo	MED-LO	3.5	1320	52	36	1315	52	36	1315	52	36	1315	52	36	1280	53	37	1240		
	Low Fire: Low	LOW	3.0	1180	58	40	1180	58	40	1175	58	41	1170	58	41	1140	60	42	1120		
Upflow Models	GUIS115C_50 (35-65)	HIGH	5.0	2330	37	----	2245	38	----	2165	39	----	2065	41	----	1985	43	----	1885		
		MED-HI	5.0	2120	40	----	2070	41	----	2020	42	----	1940	44	----	1850	46	----	1775		
	High Fire: Med-Lo	MED-LO	4.0	1875	45	----	1840	46	----	1800	47	----	1735	49	----	1685	51	35	1600		
	Low Fire: Low	LOW	3.0	1290	----	46	1275	----	47	1250	----	48	1235	----	48	1210	----	49	1170		
	GUIS140C_50 (45-75)	HIGH	5.0	2455	----	----	2390	----	----	2290	45	----	2200	46	----	2050	50	----	1935		
		MED-HI	5.0	2050	50	----	2025	50	----	1965	52	----	1890	54	----	1810	56	----	1715		
	High Fire: Medium	MED-LO	4.0	1715	60	----	1700	60	----	1660	62	----	1615	63	----	1555	66	46	1472		
	Low Fire: Low	LOW	3.5	1450	70	49	1436	71	50	1413	72	51	1380	74	52	1338	----	53	1280		
	Counterflow Models	GCISO70C_35 (35-65)	HIGH	3.5	1655	----	----	1580	----	----	1500	----	----	1445	35	----	1366	37	----	1280	
			MED-HI	3.0	1530	----	----	1470	35	----	1400	37	----	1345	38	----	1280	40	----	1210	
		High Fire: Med-Lo	MED-LO	3.0	1090	47	----	1075	48	----	1055	48	----	1015	50	35	975	52	37	915	
		Low Fire: Low	LOW	2.5	945	54	38	935	55	38	915	56	39	890	57	40	850	60	42	810	
GCISO90C_50 (45-75)		HIGH	5.0	2110	----	----	2030	----	----	1960	----	----	1870	----	----	1780	----	----	1680		
		MED-HI	4.0	1830	----	----	1765	----	----	1710	----	----	1640	----	----	1550	----	----	1470		
High Fire: Med-Lo		MED-LO	3.5	1260	54	----	1255	54	----	1230	55	----	1200	57	----	1170	58	----	1115		
Low Fire: Low		LOW	3.0	1015	67	47	1000	68	48	980	70	49	964	71	49	930	73	51	875		

NOTES:

1. All furnaces ship as high speed for cooling. Installer should adjust blower speed as needed. For most jobs, about 400 CFM per ton when cooling is desired.
2. THE INSTALLATION MUST BE ADJUSTED TO OBTAIN A TEMPERATURE RISE WITHIN THE RANGE LISTED ON THE FURNACE.
3. The above chart is for furnaces installed 0 - 2,000'. At higher elevations, a properly derated unit will have about the same temperature rise at a particular CFM, while the ESP at that CFM will be lower.
4. The shaded () area indicates ranges in excess of allowable maximum external static pressure when heating. For satisfactory operation, the external static pressure should **NOT** exceed 0.50" W.C. The data for 0.6" W.C. is for air conditioning purposes only.
5. The dashed (----) areas indicate a temperature rise not recommended for this model.

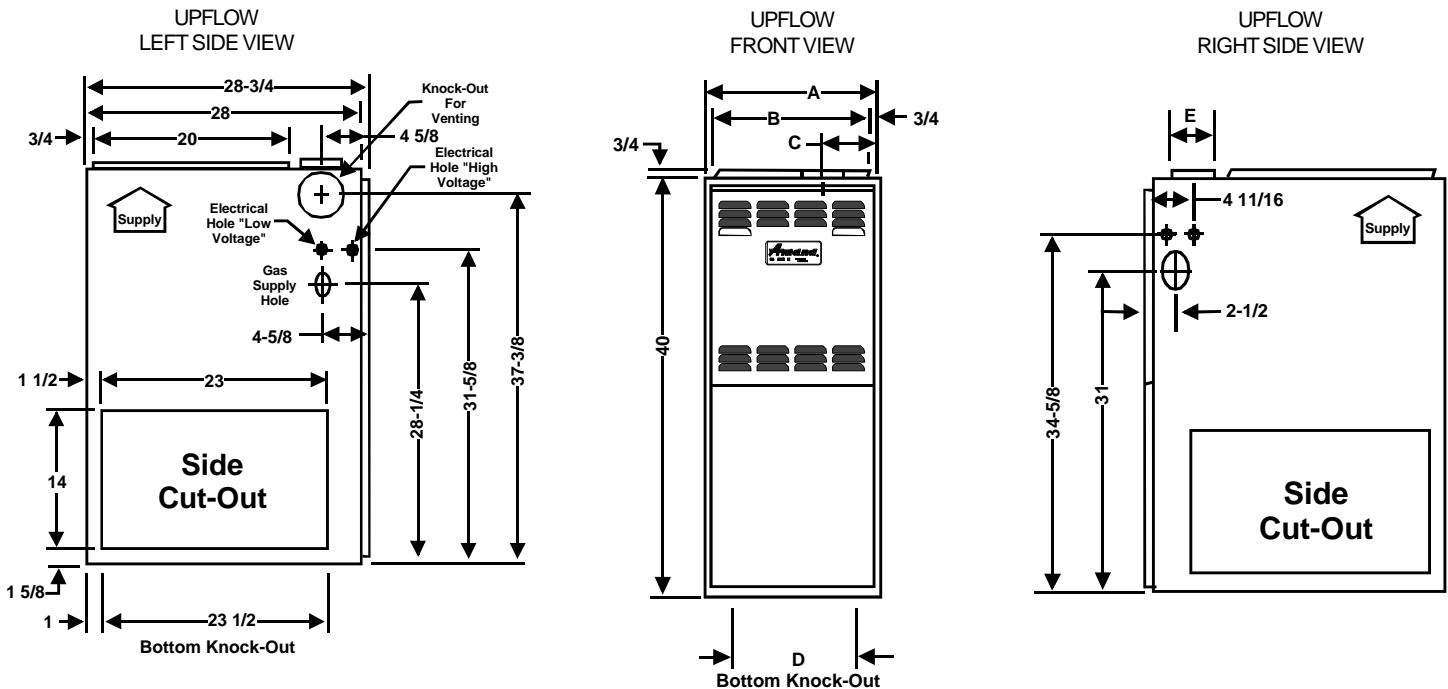
Thermostats

Thermostat Requirements – A two-stage thermostat should be used with the GUIS/GCIS furnace. A two-stage thermostat controls which firing rate is used depending on the temperature difference between the set point and the room temperature. A two-stage thermostat and furnace properly used will maintain a much tighter control of temperature than a conventional single-stage thermostat and furnace. A two-stage furnace has both "W1" and "W2" terminals. If the thermostat has "Y1" and "Y2" cooling connections and a one stage cooling system is used, connect "Y" on the furnace control to "Y1" on the thermostat. The table (right) describes three two-stage thermostats which have been set up for use with this furnace. However, if a single-stage heat thermostat is used, the TSRK01 Two-Stage Relay Kit MUST be used.

Thermostats								
Thermostat	Man/Auto	Programmable	Cool	Heat	Batt. Powered	Batt. Bkup*	Shape	Color
1213411	Man. Changeover	No	2	2	No	No	Rectangular	White
1213407	Man. Changeover	Yes	1	2	No	No	Rectangular	White
1213406*	Man. Or Auto Changeover	Yes	2	3	No	Yes	Rectangular	Beige

*1213406 is the recommended model for GUIS furnaces when used with a heat pump in a fossil fuel application. It is NOT for use with the GUIS as a sole heating source. 1213406 thermostats are 24V powered with battery backup. Please See Accessories Section For Complete Thermostat Listing.

GUIS Unit Dimensions: (all dimensions in inches)



GUIS Dimensions

	A	B	C	D	E
GUIS070	16-1/2	15	5-1/4	12-5/8	4
GUIS090	20-1/2	19	7-1/4	14-5/8	4
GUIS115 GUIS140	24-1/2	23	9-1/4	18-5/8	4

CLEARANCES TO COMBUSTIBLE SURFACES GUIS MODEL FURNACES (inches)

	UPFLOW	HORIZONTAL LEFT	HORIZONTAL RIGHT
FRONT	6 ¹	Alcove	Alcove
RIGHT	0	6	12
LEFT	0	12	6
REAR	0	0	0
TOP	1	6	6
FLUE	6 ²	6 ²	6 ²
FLOOR	C	C	C

¹ = 3 inch when using Type B-1 vent is used.

² = 1 inch when Type B-1 vent is used.

C = If placed on combustible floor, floor **MUST** be wood **ONLY**.

NC = For installation on non-combustible floors only. A combustible floor subbase (ASB01) must be used for installations on combustible floors.

NOTE: 36 inches is required for servicing or cleaning.

In all cases, accessibility must take precedence over clearances from the enclosure where accessibility clearances are greater.

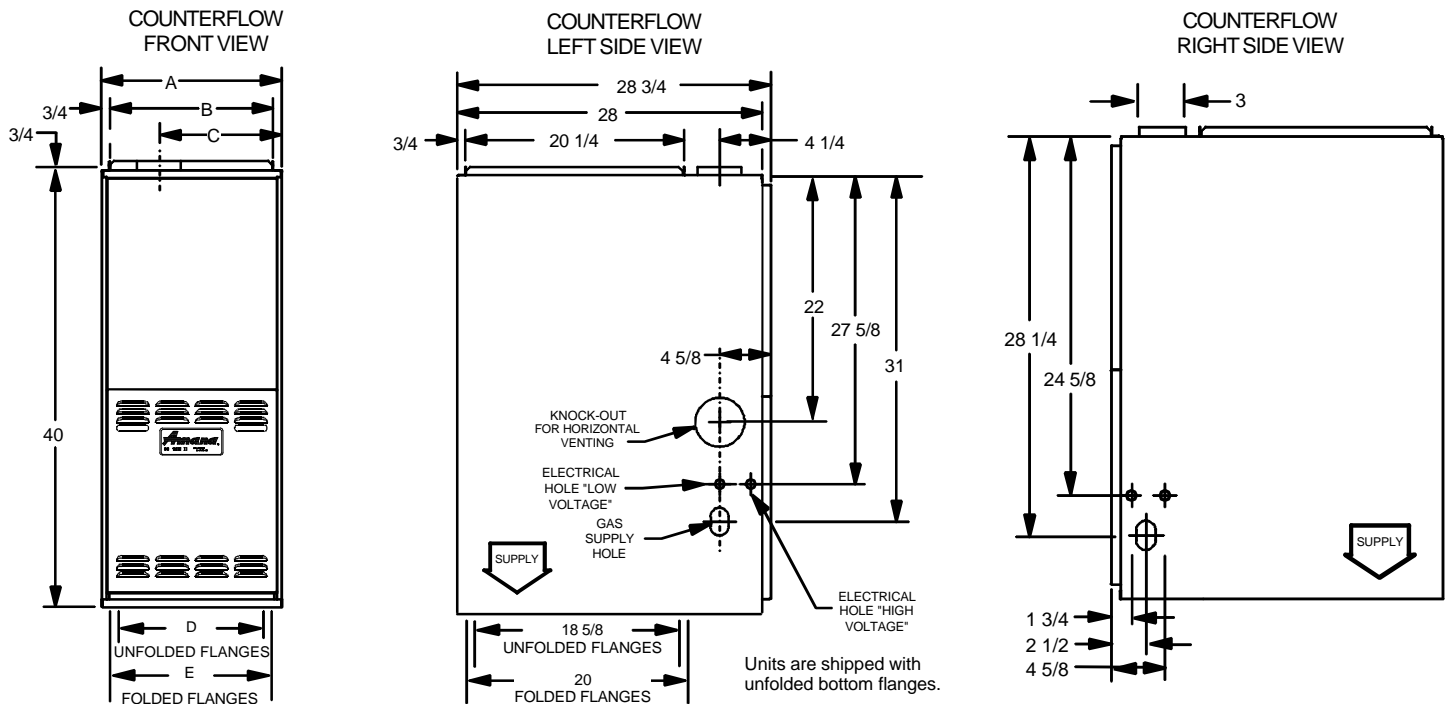
Minimum Vent Diameter

Model	GUIS	GCIS
70	4 Inch	4 Inch
90	4 Inch	4 Inch
115	5 Inch	N/A
140	5 Inch	N/A

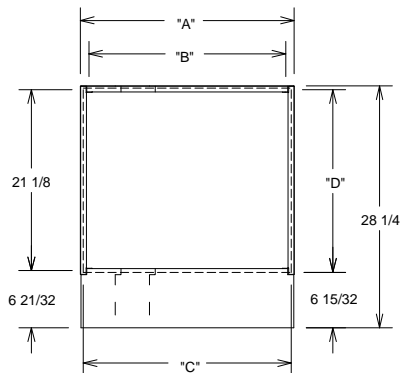
Under some conditions, larger vents than those shown above may be required or allowed.

All installations must be vented in accordance with National Fuel Gas Code, MFPA54/ ANSI Z223.1 - latest edition. In Canada, the furnaces must be vented in accordance with the National Standard of Canada, CAN/CGA B149 - latest additions and amendments.

GCIS Unit Dimensions: (all dimensions in inches)



Counterflow Models	A	B	C	D Folded	E Unfolded
GCIS070	16-1/2	15	5-3/8	13-1/2	15
GCIS090	20-1/2	19	7-3/8	17-1/2	19



GCI DIMENSIONS (Inches)				
Furnace Model	Dim. "A" Subbase Width	Dim. "B" Plenum Chamber	Dim. "C" Floor Opening	Dim. "D" Floor Opening
GCI_070	17	15	16-1/8	21-1/4
GCI_090	21	19	20-1/8	21-1/4

Floor Opening = Y x 21-1/4

Plenum Size = X x 21-1/8

(Exterior Dimensions)

Subbase adjustable to fit both cabinet sizes.

Detailed installation instructions ship with subbase.

CLEARANCES TO COMBUSTIBLE SURFACES GCI_MODEL FURNACES (inches)

	COUNTERFLOW	HORIZONTAL LEFT	HORIZONTAL RIGHT
FRONT	6 ¹	Alcove	Alcove
RIGHT	0	6	12
LEFT	0	12	6
REAR	0	0	0
TOP	1	6	6
FLUE	6 ²	6 ²	6 ²
FLOOR	NC	C	C

¹ = 3 inch when using Type B-1 vent is used.

² = 1 inch when Type B-1 vent is used.

C = If placed on combustible floor, floor **MUST** be wood **ONLY**.

NC=For counterflow installation on non-combustible floor only.

Counterflow installation on a combustible floor only when installed on special base **ASB01**.

Minimum Vent Diameter

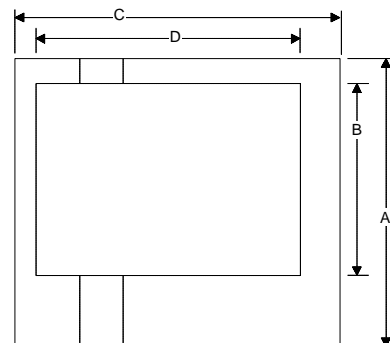
Model	GUIS	GCIS
70	4 Inch	4 Inch
90	4 Inch	4 Inch
115	5 Inch	N/A
140	5 Inch	N/A

Under some conditions, larger vents than those shown above may be required or allowed.

All installations must be vented in accordance with National Fuel Gas Code, MFPA54/ ANSI Z223.1 - latest edition. In Canada, the furnaces must be vented in accordance with the National Standard of Canada, CAN/CGA B149 - latest additions and amendments.

ACCESSORIES:**Counterflow Subbase**

Part No.	Used on Models	Dimensions (in inches)			
		A	B	C	D
ASB01	All	28-1/4	21-1/4	17, 21, 25	16-1/8, 21-1/8, 24-1/8

**High Altitude Natural Gas**

Kit Part No.	For Use With	
HATS01	GUIS070(CA/CX)35	3,001 to 7,000 ft.
HATS02	GUIS090(CA/CX)30	3,001 to 7,000 ft.
	GUIS090(CA/CX)50	3,001 to 7,000 ft.
HATS03	GUIS115(CA/CX)50	3,001 to 7,000 ft.
HATS04	GUIS140CA50	3,001 to 7,000 ft.
HATS05	GUIS070CX50	3,001 to 7,000 ft.
	GUIS090CX50	3,001 to 7,000 ft.

NOTE: All installations above 3,000 feet require a pressure switch change. For installation in Canada, the gas furnaces are certified to only **4,500 ft.**

Propane (LP) Conversion Kits

Kit Part No.	For Use With
LPTK09A	All GUIS/GCIS Furnaces to 8,500 ft.

NOTE: For propane gas installations, the LPTK09A conversion kit has the required orifices for installations up to 8,500 feet. For propane gas installations between 3,001 and 8,500 feet, the HATS kits are required for the pressure switch change.

Twinning Kits

Twinning Kits are not for use with the GUIS/GCIS furnace. The use of a twinning kit would not enhance two-stage furnace capability.

Fossil Fuel Kit

In a fossil fuel application using FFK03A, both stages of a two-stage furnace are not utilized. Therefore, a fossil fuel installation is not recommended with the GUIS/GCIS.

Amana 80% Furnace Nomenclature:

